

cles, 2mm. long, directed backwards and visibly outwards; on dorsal margins are a series of sigilla, ten in each row (in one specimen eleven are represented in anterior row, the second outer sigillum on left side having a double form, probably abnormal); anterior row—central pair circular, smallest of series; outer sigillum large, ovate; between latter and inner sigillum are intermediate forms decreasing in size; in posterior row outer pairs of sigilla are smaller and of a linear-oval form; in centre of abdomen are four small linear-oval sigilla representing a trapezoid, whose posterior side is widest; from the tumid posterior margin abdomen dips abruptly, 4mm., to spinners; this area has, including the marginal, five well-developed transverse corrugations, first connects base of posterior lateral spines, second projects backwards, and bears the spine-like tubercles; three corrugations on ventral surface; in all grooves are small sigilla, ten in first row; at extremity of each wing-like projection is a large, blackish, ovate sigillum, equal to dorsal one in size. Vulva black; large, somewhat conical, apex rounded; viewed from posterior end displays a membranous ridge, terminating beyond base.

This species is closely allied to *Gasteracantha westringii*, from New Holland, described and figured by Koch in "Die Arachniden Australiens." Two examples were captured by Miss Lodge at Norfolk Island. I am indebted to Mr. T. F. Cheeseman, F.L.S., for the specimens which he handed over to me for determination.

DESCRIPTION OF PLATE VII.

Gasteracantha ocillatum.

Fig. 1. Female.

Fig. 2. Maxillæ, lip, and sternum.

Fig. 3. Posterior view.

ART. XIV.—*Descriptions of New Zealand Micro-Lepidoptera.*

By E. MEYRICK, B.A., F.E.S.

Read before the Philosophical Institute of Canterbury, 1st Nov., 1888.]

THE following descriptions include all the material remaining undescribed in my hands of these groups. It is for resident collectors to obtain fresh material and information on the habits of described species, and I shall at all times welcome any communication from those who have the opportunity of doing so, and will gladly determine any species sent to me.





BOTYDIDÆ.

MNESICTENA, Meyr.

1. *Mnes. daiccalis*, Walk.

(Scopula daiclesalis (rect. daiccalis), Walk., 1017.)

♂. 22mm. Head and thorax deep ferruginous. Palpi 4, deep ferruginous, sprinkled with dark grey; base white beneath. Antennæ pale ochreous. Abdomen light ochreous-yellowish. Legs pale ochreous, anterior tarsi and middle tibiæ white. Forewings triangular, costa slightly sinuate in middle, strongly arched on posterior half, apex tolerably rectangular, hindmargin rather bowed, oblique; ferruginous-brown, irrorated with dark grey; inner margin rather broadly suffused with ochreous-orange from base to $\frac{3}{4}$; a narrow ochreous-orange streak along costa from base to $\frac{3}{4}$, enclosing a very slender snow-white costal streak from $\frac{1}{4}$ to $\frac{2}{3}$; lines thick, cloudy, dark grey, very indistinctly defined; first about $\frac{1}{4}$, oblique, not reaching either margin; second from $\frac{3}{4}$ of costa to $\frac{2}{3}$ of inner margin, upper $\frac{2}{3}$ moderately curved outwards; reniform obscurely outlined with dark grey, very indistinct: cilia ferruginous-brown suffused with grey. Hindwings light ochreous-yellowish; a dark-grey dot in centre of disc; partial indications of a slender greyish line at $\frac{2}{3}$; cilia pale whitish-yellowish, reddish-tinged.

Wellington and Dunedin. I am indebted, for the opportunity of describing this species to the liberality of Mr. G. V. Hudson, who states that it is attracted by light, and is scarce.

SCOPARIADÆ.

SCOPARIA, Hw.

2. *Scop. hemiplaca*, n. sp.

♂. 18mm. Head, palpi, antennæ, and thorax dark fuscous; palpi $2\frac{1}{4}$, base white beneath; antennal ciliations $\frac{1}{3}$. Abdomen light grey, and tuft whitish-ochreous. Legs dark fuscous, apex of joints and posterior tibiæ whitish. Forewings elongate, moderately dilated posteriorly, costa slightly arched, apex obtuse, hindmargin almost straight, rather oblique, rounded beneath; dark fuscous, with purplish reflections: first line obscurely indicated on lower half only, slightly paler than ground-colour; a suboblong white blotch, sprinkled with fuscous, extending along inner margin from middle to hindmargin, reaching half across wing, its upper anterior angle rounded off, upper side shortly indented in middle; this blotch is sharply defined, and margined in front and above by a thick black suffusion, in which the lower half of reniform is indicated by an obscure spot of ground-colour;

second line slightly paler than ground-colour, darker-margined, forming a whitish dot on costa, becoming obsolete on the white blotch, but its margins partially indicated by fuscous scales; an erect wedge-shaped white subapical spot; a white entire hindmarginal line: cilia ochreous-whitish, with an interrupted dark-grey line, and on upper half of hindmargin with obscure light-grey bars. Hindwings $1\frac{1}{4}$; pale grey; indications of a faint paler postmedian line; cilia ochreous-whitish, with an interrupted grey line.

Wellington; one specimen received from Mr. G. V. Hudson, who bred it from a larva feeding on moss. It is a conspicuously-distinct species, at once recognised by the peculiar white blotch; its nearest known ally is *S. minusculalis*.

TORTRICIDÆ.

CACÆCIA, Hb.

3. *Cac. astrologana*, n. sp.

♂. 16–22mm. Head, palpi, antennæ, thorax, abdomen, and legs pale whitish-ochreous; palpi long; anterior legs infuscated. Forewings elongate-triangular; costa strongly arched, apex obtuse, hindmargin slightly sinuate, somewhat oblique, costal fold short; whitish-ochreous, with a few fine scattered black scales; a small black dot in disc before middle, a second in disc at $\frac{2}{3}$ (in Tasmanian specimen absent), a third beneath costa at $\frac{2}{3}$, a fourth in disc at $\frac{5}{6}$, and a fifth towards inner margin at $\frac{2}{3}$: cilia pale whitish-ochreous. Hindwings whitish, with a few scattered light-grey speckles; cilia whitish.

Wellington; one specimen received from Mr. G. V. Hudson. I took a specimen also at Deloraine, Tasmania, in November; the species is very distinct, and I have no doubt of their identity.

PROSELENA, Meyr.

4. *Pros. cribola*, n. sp.

♂. 14–15mm. Head, palpi, and thorax dark reddish-ochreous-brown. Antennæ brownish-ochreous, ringed with dark fuscous. Abdomen dark fuscous. Legs dark fuscous, apex of joints pale yellowish, posterior tibiæ pale greyish-ochreous. Forewings oblong, posteriorly scarcely dilated, costa on basal half rather strongly arched, then straight, apex obtuse, hindmargin slightly sinuate, somewhat oblique; dark reddish-ochreous-brown; a somewhat darker but very ill-defined central fascia from before middle of costa to inner margin before anal angle, narrow on costa, suddenly dilated above middle, thence to inner margin rather broad: cilia dark reddish-ochreous-brown, terminal half pale reddish-ochreous, on costa barred with dark brown. Hindwings and cilia dark

fuscous; tips of cilia shortly below apex sometimes pale reddish-ochreous.

Otira River (3,000ft.), amongst forest, in January; four specimens. A distinct species, perhaps nearest *P. zatrophana*.

GLYPHIPTERYGIDÆ.

HELIOSTIBES, Z.

5. *Hel. electrica*, n. sp.

♀. 16–17mm. Head, palpi, thorax, and abdomen dark fuscous, slightly sprinkled with yellowish. Antennæ and legs dark fuscous, posterior tibiæ yellow-whitish. Forewings elongate, moderate, costa gently arched, apex rounded, hindmargin obliquely rounded; dark fuscous, strewn with ochreous-yellow hair-scales in irregular patches; a leaden-metallic line from $\frac{1}{3}$ of costa to $\frac{2}{5}$ of inner margin, angulated outwards in middle; a sinuate leaden-metallic line from above middle of disc to anal angle; a leaden-metallic line from middle of costa obliquely outwards more than half across wing, thence curved round to touch a whitish dot on costa at $\frac{3}{4}$, and continued in a strong curve near and parallel to costa and hindmargins to anal angle; space between first and second lines, and within first curve of third line, less strewn with yellow scales and therefore darker than rest of wing: cilia light grey, rather shining. Hindwings rather dark fuscous, somewhat bronzy; cilia light shining grey.

Mount Arthur (4,700ft.), in January; two specimens. Very distinct.

PLUTELLIDÆ.

EUTORNA, n. g.

Head smooth, sidetufts projecting over forehead; ocelli absent; tongue well-developed. Antennæ $\frac{4}{5}$, in male serrate, shortly ciliated ($\frac{1}{4}$ – $\frac{1}{3}$), basal joint moderately long, without pecten. Labial palpi long, curved, ascending, second joint thickened with dense appressed scales, terminal joint shorter than second, slender, acute. Maxillary palpi very short, drooping. Posterior tibiæ clothed with hairs above. Forewings with vein 1 furcate, 2 from very near angle, 6 to apex, 7 and 8 stalked, 11 from before middle. Hindwings almost or quite as broad as forewings, elongate-ovate or broadly lanceolate, cilia $1\frac{1}{3}$; all veins separate, 5 bent.

Approaches most nearly to *Compsistis*, from which it differs mainly in the antennæ not being as long as forewings, and in veins 3 and 4 of the hindwings being separate. Besides the two following species I have several Australian, which are closely allied to them:—

Ground-colour of forewings	ferruginous-brown	..	<i>caryochroa</i> .
"	"	"	"
"	ochreous	..	<i>symmorpha</i> .

6. *Eut. caryochroa*, n. sp.

♂ ♀. 11–12mm. Head ferruginous-brown, face whitish-ochreous. Palpi ochreous-white, apex of second joint ochreous, terminal joint almost as long as second, dark fuscous. Antennæ fuscous, ringed with black. Thorax ferruginous-brown, shoulders pale ochreous. Abdomen fuscous. Legs dark fuscous, ringed with ochreous-whitish. Forewings elongate, narrow, costa moderately arched, more strongly towards base, apex round-pointed, hindmargin extremely obliquely rounded; rather dark ferruginous-brown; an upwards-curved yellowish-white streak from middle of base to $\frac{2}{5}$ of disc, margined beneath with blackish, above with bright yellow-ochreous, which extends to costa towards base; a slender white oblique streak from $\frac{2}{5}$ of costa to middle of disc, margining a triangular costal suffused patch of purplish-grey and whitish scales, beneath which is sometimes a longitudinal blackish suffusion; a black dot in disc at $\frac{2}{3}$, surrounded by a yellowish-white ring; some purplish-grey scales towards posterior half of inner margin; a small white spot on costa at $\frac{4}{5}$, beyond which is a blackish suffusion; an obscure irregular whitish streak along hindmargin, followed by some black scales: cilia ochreous, towards anal angle greyish-tinged, round apex with a white median line preceded and followed by fuscous shades. Hindwings rather dark bronzy-fuscous; cilia fuscous-grey.

Castle Hill (2,500ft.), Dunedin, Lake Wakatipu, and Invercargill; in December and January, rather common.

7. *Eut. symmorpha*, n. sp.

♂ ♀. 12–14mm. Head and thorax yellow-ochreous, face whitish-ochreous. Palpi yellow-ochreous, terminal joint much shorter than second, whitish. Antennæ ochreous-whitish, ringed with pale fuscous, towards base ochreous. Abdomen whitish-ochreous. Legs whitish-ochreous, tarsi and anterior tibiæ more or less infuscated. Forewings elongate, narrow, costa moderately arched, more strongly near base, apex round-pointed, hindmargin extremely obliquely rounded; yellow-ochreous, sometimes obscurely streaked with whitish-ochreous between veins, veins more reddish-ochreous or brownish-ochreous; a straight, slender, reddish-brown streak from middle of base to disc at $\frac{2}{5}$, terminating in a small blackish spot, cloudy beneath, above sharply-defined and sometimes margined with an ochreous-whitish streak; a more or less distinct reddish-brown streak from disc before middle to costa before apex, terminating in some black scales; two black dots transversely placed in disc at $\frac{2}{3}$; some black scales on hindmargin: cilia pale ochreous, round apex with an ochreous-brown line. Hindwings and cilia light grey.

Whangarei, Hamilton, Palmerston, Napier, Christchurch, Dunedin, and Invercargill; from December to March, common.

HYPONOMEUTIDÆ.

ARCHYALA, n. g.

Head with loosely-appressed hairs; ocelli present; tongue developed. Antennæ $\frac{3}{4}$, in male serrate, pubescent, basal joint moderate, without pecten. Labial palpi moderately long, curved, ascending, second joint with rough projecting scales towards apex beneath and two or three apical bristles above, terminal joint shorter than second, somewhat loosely scaled, laterally compressed, obtuse. Maxillary palpi rather short, appressed to face. Posterior tibiæ clothed with long hairs above and beneath. Forewings with vein 1 furcate, 2 from angle of cell, 7 and 8 stalked, 7 to costa, 11 from middle. Hindwings 1, elongate-oblong, apex round-pointed, hindmargin very oblique, cilia 1; with an ill-defined hyaline patch towards base; veins 2, 3, 4 remote and parallel, 5 and 6 stalked, 6 to close below apex, 7 approximated to 6 at base.

Nearly allied to *Lysiphragma*, but separable by the stalking of veins 7 and 8 of forewings, absence of scaletufts on surface, and hyaline patch of hindwings.

8. *Arch. paraglypta*, n. sp.

♂. 16mm. Head fuscous-whitish, more fuscous between antennæ. Palpi dark fuscous, terminal joint whitish. Antennæ fuscous. Thorax fuscous, posteriorly mixed with whitish. Abdomen fuscous. Anterior legs dark fuscous ringed with whitish, middle legs ochreous-white banded with black, posterior legs ochreous-whitish banded with fuscous. Forewings very elongate, narrow, costa moderately arched, apex round-pointed, hindmargin extremely obliquely rounded; white, irregularly transversely strigulated with grey, and more or less suffused with pale brownish-ochreous except towards inner margin and base, and on costal edge; numerous irregular incomplete transverse dark fuscous strigulæ, tending to partially coalesce in pairs: cilia grey-whitish, base white, round apex with a black median line and barred with fuscous. Hindwings bronzy-fuscous; cilia whitish-grey.

Christchurch; one specimen amongst bush, in January.

ENDROSIS, Hb.

Head smooth; ocelli present; tongue developed. Antennæ $\frac{4}{5}$, in male strongly ciliated ($2\frac{1}{2}$), basal joint moderate, with pecten. Labial palpi long, curved, ascending, with appressed scales, terminal joint somewhat shorter than second, acute. Maxillary palpi very short, appressed to tongue.

Posterior tibiæ clothed with long hairs above. Forewings with vein 1 furcate, 2 from $\frac{3}{4}$ of cell, 4 and 5 approximated at base, 7 and 8 stalked, 7 to costa, 11 from before middle. Hindwings somewhat narrower than forewings, elongate, long-pointed, tolerably acute, cilia 2; with an ill-defined hyaline patch towards base; veins 3 and 4 stalked, 5 absent, 6 and 7 parallel.

Only the one species is known. Stainton and Wocke both state the ocelli to be absent; they are, however, distinct, but placed close beneath the root of the antennæ, and therefore easy to be overlooked. A more singular and unaccountable error is that both these writers describe the antennæ as not ciliated, whereas the ciliations are unusually long for this group.

9. *Endr. lacteella*, Schiff.

(*Gelechia subditella*, Walk., 657; (?) *G. adaptella*, ib., 653.)

♂ ♀. 13–18mm. Head and thorax white. Palpi white, terminal joint with base and a subapical band black. Forewings elongate, narrow, pointed; pale greyish-ochreous, sprinkled with dark fuscous and a few white scales; a white basal dot; a basal patch enclosing this, a patch along costa towards middle, a small cloud on middle of inner margin, one at anal angle, and another at apex fuscous; a black dot beneath costa at $\frac{1}{4}$, a second, longitudinally elongate, rather obliquely beyond it on fold, a third beneath middle of costa, and a fourth in disc at $\frac{3}{5}$: cilia pale whitish-ochreous, basal half sprinkled with dark fuscous. Hindwings whitish-grey; cilia pale whitish-ochreous.

Whangarei, Napier, Taranaki, Palmerston, Wellington, Christchurch, Bealey River, and Invercargill, probably therefore universally distributed; in houses, from October to March. Accidentally introduced from Europe, and common in Australia also; the larva feeds on seeds, dried foods, &c. Walker's type of *Gelechia adaptella* is much damaged, and its identification not quite certain.

BUTALIS, Tr.

Head smooth; ocelli present; tongue well-developed. Antennæ $\frac{4}{5}$, in male filiform, shortly ciliated ($\frac{1}{2}$ –1), basal joint moderate, without pecten. Labial palpi moderately long, curved, ascending, with appressed scales, terminal joint shorter than second, pointed. Maxillary palpi very short, slender, drooping. Posterior tibiæ clothed with long hairs above. Forewings with vein 1 simple or rarely shortly furcate, 2 from angle of cell, 3 absent, 7 and 8 stalked, 7 to hindmargin, 11 from about middle. Hindwings $\frac{1}{2}$ to almost 1, lanceolate, cilia 1–4; veins all separate, and tolerably parallel.

A genus of considerable extent; it is cosmopolitan, but

apparently most developed in Europe. The single New Zealand species approaches most to some of the Australian.

10. *But. epistrotata*, n. sp.

♂ ♀. 10–11mm. Head, palpi, antennæ, thorax, abdomen, and legs rather dark grey, slightly bronzy-tinged, generally somewhat sprinkled with whitish; antennal ciliations $\frac{1}{2}$; abdomen in female whitish beneath. Forewings lanceolate; rather dark bronzy-grey, more or less densely strewn with whitish scales; in paler specimens there are indications of two very ill-defined inwardly oblique darker streaks on anterior half, more distinctly spotted with darker on fold, and two less perceptible outwardly oblique streaks on posterior half; an obscure round dark fuscous dot in disc at $\frac{3}{4}$; cilia pale bronzy-grey. Hindwings $\frac{2}{3}$, grey; cilia 2, pale bronzy-grey.

Christchurch (on the Lyttelton volcanic hills) and Mount Arthur (4,500ft.), in January; locally common.

TINEIDÆ.

HABROPHILA, n. g.

Head shortly rough-haired; ocelli present; tongue short. Antennæ in male—(?), filiform, basal joint moderately long, with strong pecten. Labial palpi long, slightly curved, somewhat ascending, second joint beneath with short, dense, rough, projecting tuft of scales towards apex; terminal joint much shorter than second, somewhat loosely scaled, tolerably obtuse. Maxillary palpi moderate, loosely scaled, folded. Posterior tibiæ with a few hairs beneath. Forewings with vein 1 simple, 2 from $\frac{3}{4}$ of cell, 5 and 6 approximated at base, 7 and 8 approximated at base, 7 to costa, 11 from before middle. Hindwings $\frac{2}{3}$, lanceolate, cilia $2\frac{1}{2}$; veins 2, 3, 4, remote and parallel, 5 and 6 stalked, 6 to hindmargin, 7 remote.

Allied to *Endophthora*. The single specimen has the apex of both antennæ broken, and their length is uncertain.

11. *Habr. compsecta*, n. sp.

♀. 11mm. Head, palpi, antennæ, and thorax whitish-ochreous, with a few dark fuscous scales. Abdomen ochreous-whitish. Legs pale whitish-ochreous, anterior pair infuscated. Forewings very elongate, narrow, parallel-sided, short-pointed; whitish-ochreous, suffusedly irrorated with dark fuscous, less towards base; costa marked with blackish-fuscous; a blackish dot on inner margin almost at base; an irregular series of blackish scales along fold; a small whitish spot on costa at $\frac{1}{5}$; a large oblique subquadrate white spot on costa slightly before middle, reaching nearly half across wing; a small round black spot in disc before $\frac{3}{4}$, preceded by some blue-metallic scales;

posterior half of wing suffused with golden-fuscous, crossed posteriorly by two slender angulated leaden-blue-metallic fasciæ, margined by series of white dots; hindmargin dotted with blackish and white: cilia ochreous-grey-whitish. Hindwings whitish-grey; cilia grey-whitish.

Mount Arthur (4,000ft.), in January; one specimen.

ARGYRESTHIADÆ.

Head more or less rough on crown, face smooth. Antennæ in male simple. Maxillary palpi obsolete. Forewings usually with a rough space on costa between veins 11 and 12.

The family is fairly well represented in Australia. I have only five New Zealand species, of which perhaps three are scarcely indigenous, but of Australian or exotic origin.

- | | |
|---|--------------------|
| 1. Forewings with vein 5 absent | 3. |
| " " present | 2. |
| 2. Forewings with " veins 7 and 8 stalked | <i>Circostola.</i> |
| " " separate | <i>Hofmannia.</i> |
| 3. Forewings with " vein 10 absent | <i>Cateristis.</i> |
| " " present | <i>Bedellia.</i> |

HOFMANNIA, Wk.

Head rough on crown, face smooth; ocelli present; tongue developed. Antennæ $\frac{3}{4}$, in male simple, subserrate, basal joint moderate, with pecten. Labial palpi moderately long, slightly curved, drooping, filiform, somewhat loosely scaled beneath, terminal joint shorter than second, sometimes more loosely scaled, tolerably pointed. Maxillary palpi obsolete. Posterior tibiæ smooth-scaled. Forewings with vein 1 furcate, 2 from near angle of cell, 7 to hindmargin, 9 and 10 sometimes from a point, 11 from about middle. Hindwings 1, lanceolate, cilia 2; vein 4 absent, 5 and 6 rather approximated, 6 to hindmargin.

A small genus, occurring in Europe and Australia.

12. *Hofm. sphenota*, n. sp.

♂. 13mm. Head and antennæ light ochreous-grey. Palpi grey. Thorax light ochreous. Abdomen whitish-ochreous. Legs fuscous, posterior pair ochreous-whitish. Forewings very elongate, very narrow, parallel-sided, long-pointed, acute; pale ochreous, thinly and irregularly sprinkled with dark fuscous and whitish; basal half of costa dotted with black; a moderately-broad ill-defined cloudy-white streak along inner margin from base to anal angle, pointed at extremities, interrupted at $\frac{2}{3}$ by a small spot of ground-colour; a cloudy inwardly-oblique dark fuscous mark at $\frac{1}{3}$ from near costa to near inner margin: cilia ochreous-grey-whitish, round apex ochreous, with base white, a grey line, and three cloudy dark grey bars. Hindwings pale whitish-grey; cilia ochreous-grey-whitish.

Christchurch; one specimen amongst bush, in August. This species closely approaches an Australian form, and, my material being scanty, I am not sure that they are not to be regarded as local races only; however, at present I am disposed to consider them as distinct.

CIRCOSTOLA, n. g.

Head loosely scaled, rather rough behind, face smooth; ocelli present; tongue developed. Antennæ $\frac{3}{4}$, in male simple, filiform, basal joint moderate, with pecten of two or three fugitive scales. Labial palpi moderately long, curved, somewhat ascending, second joint with loose rough scales beneath towards apex, terminal joint somewhat shorter than second, loosely rough-scaled anteriorly, pointed. Maxillary palpi obsolete. Posterior tibiæ smooth-scaled. Forewings with vein 1 simple, 2 from $\frac{4}{5}$ of cell, 7 and 8 stalked, 7 to hindmargin, 11 from $\frac{1}{3}$. Hindwings 1, lanceolate, hindmargin sinuate beneath apex, cilia $1\frac{2}{3}$; vein 4 absent, 5 and 6 rather approximated, 6 to hindmargin.

Intermediate in some respects between *Zelleria* and *Argyresthia*. The head is less rough than in any other genus of the family. Only the one species is known to me.

13. *Circ. copidota*, n. sp.

♂ ♀. 15–16mm. Head white, face ochreous-tinged. Palpi reddish-fuscous, terminal joint suffused with whitish. Antennæ ochreous-whitish, ringed with dark fuscous. Thorax white, shoulders ochreous-tinged. Abdomen ochreous-whitish. Legs whitish, anterior and middle pair irrorated and suffusedly tinged with dark fuscous. Forewings very elongate, narrow, costa strongly arched, apex very acute, produced, hindmargin obsolete; pale brownish-ochreous, with a few dark fuscous and whitish scales; a broad whitish streak along inner margin from base to middle, posteriorly attenuated to a point, and sometimes suffused, margined above by an irregular slender streak of black scales from base not reaching its apex; from extremity of this a slender irregular darker ochreous-brown suffused streak to apex of wing, marked with indications of blackish dots at $\frac{2}{3}$ and apex: cilia pale whitish-ochreous, nearly white on costa at $\frac{3}{4}$, above apex brownish-ochreous, with a suffused blackish apical bar. Hindwings and cilia ochreous-grey-whitish.

Nelson, Wellington, Otira River (1,500ft.), and Lake Wakatipu (1,200ft.), in December and January; rather common amongst forest.

CATERISTIS, n. g.

Head rough on crown, face smooth; ocelli present; tongue developed. Antennæ $\frac{4}{5}$, in male simple, serrate, basal joint

moderately elongate, with large, dense, strong pecten. Labial palpi very short, filiform, drooping. Maxillary palpi obsolete. Posterior tibiæ densely clothed with very long hairs above and beneath. Forewings with vein 1 simple, 2, 3, and 4 almost from a point, 5 and 6 absent, cell open between 4 and 7, 7 and 8 stalked, 7 to hindmargin, 10 absent, 11 from middle. Hindwings $\frac{3}{2}$, lanceolate, cilia 3; veins 3, 4, 5 absent, cell open between 2 and 6, 6 and 7 stalked, 6 to hindmargin.

The natural group to which this and the following genus belong I formerly regarded as a distinct family (*Bedelliadæ*), separable from the *Argyresthiadæ* proper by the hairy posterior tibiæ and degraded neuration of hindwings; but from a study of more extensive material I think it better to unite them. The structure of the head is characteristic and identical, and the change of neuration is gradual.

14. *Cat. eustyla*, n. sp.

♂. 10-11mm. Head and thorax white, face grey. Palpi dark fuscous. Antennæ whitish-grey. Abdomen grey. Legs dark grey, tarsi ringed with white, middle and posterior tibiæ grey-whitish. Forewings lanceolate; snow-white; costa slenderly dark fuscous from about $\frac{1}{4}$ to $\frac{3}{4}$: cilia light grey, towards base whiter, round apex wholly white or ochreous-white, with a grey dot. Hindwings and cilia light grey.

Christchurch; one specimen amongst bush, in December. Also from Tasmania; the specimens from these two localities are absolutely similar.

BEDELLIA, Stt.

Head densely rough-haired above, face smooth; ocelli present; tongue short. Antennæ 1, in male filiform, simple, basal joint rather stout, with large dense pecten. Labial palpi short, porrected, slender, pointed. Maxillary palpi obsolete. Posterior tibiæ clothed with hairs above. Forewings with vein 1 simple, 2 from angle of cell, 3 from point with 2 or absent, 4 and 5 absent, 6 out of 8 or absent, 7 out of 8, running to hindmargin, 9 from point with 8, 11 from middle of cell. Hindwings $\frac{1}{2}$, linear-lanceolate, cilia 6; no cell, veins 2, 3, 4 on a common stalk, 4 to apex, 5, 6, 7 absent.

15. *Bed. somnulentella*, Z.

♂ ♀. 8-9mm. Head whitish-ochreous, somewhat mixed with fuscous. Thorax whitish ochreous, in front fuscous. Forewings lanceolate; vein 3 absent, 6 out of 8; pale greyish-ochreous, suffusedly irrorated with fuscous except on a streak along inner margin: cilia light ochreous-grey, on costa ochreous-whitish. Hindwings grey; cilia light ochreous-grey.

Larva mining blotches in leaves of *Convolvulus* and *Ipomœa*; pupa naked, suspended.

Dunedin; bred freely from the larva by Mr. A. Purdie. Occurs usually from September to November. Probably an introduced species, found in Europe, North America, and throughout Australia.

16. *Bed. psamminella*, n. sp.

♂ ♀. 9–10mm. Head light ochreous, crown mixed with dark fuscous. Palpi fuscous. Antennæ fuscous-whitish. Thorax and abdomen pale ochreous. Legs whitish-ochreous, anterior and middle pair infuscated. Forewings lanceolate; vein 3 present, 6 absent; pale brownish-ochreous, with a few minute black irrorations towards costa posteriorly; a small black dot on inner margin at $\frac{1}{3}$ of wing; cilia pale brownish-ochreous. Hindwings light grey; cilia pale ochreous-grey.

Taranaki, Christchurch, and Dunedin, in September, and from December to February; common.

ELACHISTIDÆ.

Head smooth. Labial palpi curved, ascending, pointed. Maxillary palpi rudimentary. Hindwings lanceolate or linear.

In this family, as in the preceding, there is a strong tendency to degradation in the neuration. Where this exists, the neuration must not in all instances be considered of equal importance; in some cases the disappearance of one or two veins must be regarded as insufficient to warrant generic separation, where no variations appear in the other structure. The New Zealand indigenous species seem to be entirely of an Australian or South Pacific character.

- | | |
|--|------------------------|
| 1. Basal joint of antennæ dilated into a large eye-cap | 2. |
| Basal joint of antennæ not dilated | 3. |
| 2. Antennæ in ♂ with very long ciliations | <i>Vanicela</i> . |
| " " " naked | <i>Calicotis</i> . |
| 3. Antennæ in ♂ with very long ciliations | <i>Stathmopoda</i> . |
| " " " shortly ciliated or naked | 4. |
| 4. Terminal joint of palpi longer than second | 5. |
| " " " not longer than second | 6. |
| 5. Antennæ in ♂ ciliated | <i>Linnæcia</i> . |
| " " " not ciliated | <i>Proterocosma</i> . |
| 6. Forewings with all veins present | 7. |
| " " " one or more veins absent | 8. |
| 7. Forewings with veins 7 and 8 stalked | <i>Syntomactis</i> . |
| " " " separate | <i>Thylacosceles</i> . |
| 8. Forewings with vein 11 absent | <i>Zapyrastra</i> . |
| " " " present, from middle of cell | 9. |
| 9. Terminal joint of palpi somewhat roughened anteriorly | <i>Batrachedra</i> . |
| Terminal joint of palpi smooth, slender | <i>Elachista</i> . |

VANICELA, Walk.

Head smooth; ocelli present; tongue developed. Antennæ almost 1, in male serrate, with very long fine ciliations (4), basal joint very broadly dilated and excavated beneath to form a large eyecap, with small pecten. Labial palpi long, curved, ascending, second joint smooth-scaled, terminal joint somewhat roughened above, as long as second, acute. Maxillary palpi very short, drooping. Anterior tibiæ and tarsi rather dilated with scales; posterior tibiæ and basal joint of tarsi clothed with stiff rough spines above, inner middle-spur spinose above on basal half, two basal joints of tarsi with short apical spines. Forewings with vein 1 furcate, 2 from $\frac{2}{3}$ of cell, 7 to costa, 7 and 8 approximated at base, 11 from $\frac{2}{3}$ of cell. Hindwings $\frac{1}{2}$, linear, cilia 6; veins 2, 3, 4 parallel, 5, 6, 7 approximated at base.

A curious genus, allied to *Stathmopoda*, but very distinct. In repose the dilated anterior legs are extended in front; the posterior legs are not erected, but appear to be usually appressed to the abdomen, without touching the surface on which the insect rests. Only the two species are known to me.

17. *Van. disjunctella*, Walk.

(*Vanicela disjunctella*, Walk., 1,039.)

♂ ♀. 13–15mm. Head, palpi, antennæ, and abdomen white. Thorax white, posterior half dark bronzy-fuscous. Legs white, base of tarsal joints spotted with dark fuscous. Forewings linear, long-pointed; shining white, slightly yellowish-tinged; a dark bronzy-fuscous streak occupying dorsal half of wing, its upper margin notched at $\frac{1}{4}$, with a short oblique indentation in middle, opposite which is a white dot on inner margin, and with a short projection at $\frac{3}{4}$; beyond $\frac{3}{4}$ are one or two very fine dark fuscous longitudinal lines; apex irrorated or spotted with dark fuscous: cilia grey, with a black apical hook. Hindwings and cilia grey.

Whangarei, Auckland, Taranaki, Palmerston, Nelson, Masterton, and Wellington; apparently, therefore, universal throughout the North Island, but not yet met with in the South: common from December to March, amongst forest. The following undoubtedly distinct Australian species is so extremely similar that I describe it here for purposes of comparison.

18. *Van. xenadelpha*, n. sp.

♂ ♀. 12–15mm. Head, palpi, antennæ, and abdomen white. Thorax white, posterior half dark bronzy-fuscous. Legs white, base of tarsal joints obliquely streaked with dark fuscous. Forewings linear, long-pointed; shining white, faintly yellowish-tinged; a dark bronzy-fuscous streak occupy-

ing dorsal half of wing, its upper margin not notched, cut in middle by a slender inwards-angulated white line reaching inner margin, and with a very minute projection at $\frac{3}{4}$; a white dot on inner margin at $\frac{1}{4}$; a fine black longitudinal line in disc towards apex: cilia grey, with a black apical hook. Hindwings and cilia grey.

Sydney, New South Wales; only on the fence of the Botanical Gardens, where it is common from September to December. Readily distinguished from the preceding by the white dot on inner margin of forewings at $\frac{1}{4}$, the absence of the notch on dorsal streak, the junction of the central indentation and dot into an angulated line, and the minuteness of the projection at $\frac{3}{4}$; these differences are entirely constant.

STATHMOPODA, Stt.

Head smooth; ocelli present; tongue developed. Antennæ $\frac{3}{4}$, in male with very long fine ciliations (4–5), basal joint elongate, without pecten. Labial palpi very long, recurved, slender, smooth-scaled, terminal joint as long as second, acute. Maxillary palpi very short, drooping. Posterior tibiæ clothed with rough hairs above, posterior tarsi with projecting bristles at apex of two basal joints. Forewings with vein 1 furcate, 2 from near angle of cell, 2 and 3 sometimes partially obsolete, 7 and 8 stalked, 7 to costa, 11 from beyond $\frac{3}{4}$. Hindwings $\frac{1}{2}$, linear-lanceolate, cilia 6; veins 2, 3, 4, 5 tolerably parallel, cell open between 5 and 6, 6 and 7 from a point.

This genus (of which the neuration is incorrectly given both by Stainton and Wocke) is represented in Europe by only one species (for the so-called *Stathmopoda guerinii* is generically quite distinct); but from Australia and New Zealand I have over thirty species, though the genus does not seem to have been identified elsewhere. It forms the type of a group, generally recognisable by the recurved palpi being directed sideways instead of forwards, the apical bristles of the tarsal joints, and the exceptional posture of the hindlegs in repose. In *Stathmopoda* the hindlegs are erected more or less perpendicularly over the back, the tarsi usually bent more sideways; but in some Australian species the insect does not always assume this posture, and sometimes does it with one leg only. Probably this attitude may be designed to deceive enemies by its unnatural appearance; it does not seem to imitate anything in particular. The occasional obsolescence of veins 2 and 3 of the forewings is an interesting phenomenon; from the examination of a good many denuded specimens I find no stress is to be laid on it; the obsolescence begins at the base of the veins, and appears in various degrees, sometimes only the extreme tips of the veins remaining. The genus differs from all others of the family, except *Vanicela*, by the very long

antennal ciliations of the male. I may add that the European and North American genus *Schreckensteinia*, Hb. (*Chrysocorys*, Curt.), belongs to this group.

1. Forewings without markings	<i>holochra</i> .
" with markings	2.
2. Forewings deep ochreous-yellow	<i>phlegyra</i> .
" whitish-ochreous or whitish	3.
3. Forewings with a dark fuscous V-shaped anterior mark	<i>campylocha</i> .
" without a dark fuscous V-shaped anterior mark	4.
4. Posterior tibiæ with conspicuous black apical ring of scales	<i>epichlora</i> .
" " without conspicuous black apical ring of scales	<i>skelloni</i> .

19. *Stath. holochra*, n. sp.

♀. 14mm. Head, palpi, antennæ, and abdomen pale whitish-ochreous. Thorax whitish-ochreous, slightly reddish-tinged. Legs pale whitish-ochreous. Forewings elongate, very narrow, broadest near base, long-pointed; pale reddish-ochreous, unicolorous: cilia pale whitish-ochreous-grey. Hindwings pale whitish-grey, posteriorly ochreous-tinged; cilia pale whitish-ochreous-grey.

Wellington; one specimen in December.

20. *Stath. phlegyra*, n. sp.

♂ ♀. 12–16mm. Head, palpi, and antennæ whitish-ochreous. Thorax ochreous-yellowish, shoulders and a central spot sometimes greyish-tinged. Abdomen pale whitish-ochreous, greyish-tinged. Legs pale whitish-ochreous, anterior pair dark fuscous. Forewings elongate, very narrow, broadest near base, long-pointed; deep ochreous-yellow; a rather broad ashy-grey streak along costa from base to near apex; a short indistinct streak on fold at $\frac{1}{3}$, an irregular spot in disc before middle, and a short irregular longitudinal streak in disc about $\frac{2}{3}$, fuscous or grey, tending to be variously suffused together or with costal streak, or frequently more or less wholly obsolete: cilia light grey. Hindwings and cilia light grey.

Auckland, Taranaki, Palmerston, and Wellington; common amongst forest, from January to March. It is a variable species, but always recognisable by the deep ochreous-yellow ground-colour.

21. *Stath. campylocha*, n. sp.

♂ ♀. 12–14mm. Head and thorax whitish-ochreous, somewhat metallic-shining. Palpi and antennæ pale whitish-ochreous. Abdomen grey. Legs whitish-ochreous, greyish-tinged, anterior pair dark grey, posterior tibiæ with dark-grey scales at origin of spurs. Forewings elongate, very narrow,

broadest near base, long-pointed; whitish-ochreous; an ochreous-fuscous or dark fuscous streak along costa from base to $\frac{3}{4}$, sometimes almost obsolete; an ochreous-fuscous or dark fuscous broadly V-shaped mark before middle, more or less suffused, variable in thickness, its angle resting on inner margin, extremities nearly reaching costa; a longitudinal line in posterior half of disc, a spot at apex, and an elongate spot at anal angle ochreous-fuscous or ochreous, sometimes partially connected: cilia grey. Hindwings rather dark grey; cilia grey.

Wellington and Dunedin; five specimens in January and February, amongst forest. Also variable; in addition to the conspicuous dark V-shaped mark of the forewings, the darker grey hindwings and grey abdomen are good distinguishing characters.

22. *Stath. skelloni*, Butl.

(*Boocara skelloni*, Butl., "Cist. Ent.," ii., 562.)

♂ ♀. 12–15mm. Head, palpi, and antennæ pale whitish-ochreous. Thorax whitish-ochreous. Abdomen pale whitish-ochreous, greyish-tinged. Legs pale whitish-ochreous, anterior pair infuscated, apex of posterior tibiæ grey. Forewings elongate, very narrow, broadest near base, long-pointed; whitish-ochreous, sometimes yellowish-tinged; markings grey, very variable, sometimes partially margined by an ochreous suffusion; normally an elongate spot on inner margin at $\frac{1}{3}$, a second beneath costa in middle, a third in disc at $\frac{2}{3}$, a fourth before apex, and a slender subcostal line from second spot to costa near apex, but these tend to be variously connected and confused; sometimes a streak along fold, or along anterior part of costa; rarely a dark ochreous-fuscous suffusion towards base of inner margin: cilia light grey, sometimes ochreous-tinged. Hindwings and cilia light grey.

Taranaki, Wellington, Blenheim, Nelson, Christchurch, Dunedin, Lake Wakatipu, and Invercargill; common amongst bush, from December to March, but seeming to disappear towards the north. Butler failed to recognise the genus; but it is fortunately unnecessary to consider how to treat his grotesquely solecistic generic name.

23. *Stath. epichlora*, n. sp.

♀. 9–11mm. Head, palpi, antennæ, thorax, abdomen, and legs whitish; anterior legs blackish in front, posterior tibiæ with a sharp black apical ring of scales, preceded above by some grey hairs. Forewings elongate, very narrow, broadest near base, long-pointed; whitish, more or less mixed with ochreous or grey in disc; markings rather dark fuscous, but cloudy and ill-defined; a small spot on inner margin at $\frac{1}{3}$, a second more conspicuous on inner margin beyond middle, and

an angulated fascia-like spot towards apex: cilia whitish-grey. Hindwings and cilia whitish-grey.

Auckland, Wellington, and the Otira River (1,500ft.); six specimens amongst forest, in December and January. A distinct but inconspicuous species.

CALICOTIS, n. g.

Head smooth; ocelli present; tongue rudimentary. Antennæ $\frac{3}{4}$, in male rather stout, filiform, basal joint broadly dilated, excavated beneath to form an eyecap, rough-scaled on posterior edge, without pecten. Labial palpi long, curved, ascending, smooth-scaled, terminal joint shorter than second, acute. Maxillary palpi obsolete. Middle tarsi with long projecting spines at apex of two basal joints; posterior tibiae clothed with dense long rough hairs above and beneath, posterior tarsi with whorls of long projecting spines at apex of all joints. Forewings with vein 1 simple, 2 and 3 absent, 4 from angle of cell, 7 and 8 stalked, 7 to costa, 11 from $\frac{5}{6}$ of cell. Hindwings $\frac{1}{2}$, linear, cilia 7; vein 4 absent, cell open between 3 and 6, 5 free rising from base, 6 and 7 from a point.

Allied to *Stathmopoda*, but differing especially by the greatly dilated and excavated basal joint of antennæ, and by the entire absence of the long antennal ciliations. In repose the imago bends the posterior legs to form an angular arch, and extends them horizontally at right angles to the body. The habits of the larva are known, and interesting.

24. *Cal. crucifera*, n. sp.

♂ ♀. 9–12mm. Head, palpi, antennæ, thorax, abdomen, and legs very pale whitish-ochreous; terminal joint of palpi with a dark fuscous line on outer edge; anterior legs suffused with blackish in front, posterior legs spotted with black on apex of joints. Forewings elongate, very narrow, broadest near base, long-pointed; ochreous-whitish, more or less irregularly suffused or blotched with ochreous; a small cloudy dark fuscous spot on inner margin near base, and another on costa slightly before middle, both in female sometimes almost obsolete; an apical black dot: cilia grey-whitish. Hindwings whitish-grey; cilia grey-whitish.

Larva 16-legged, moderately stout, cylindrical, active; whitish flesh-colour, or whitish; head pale whitish-brown. Feeds on *Platyserium grande* (a large parasitic fern, growing on tree-trunks), burrowing amongst the ripe fructification beneath the fronds, forming galleries of loose refuse; found in March.

Taranaki and Palmerston, in February and March; common amongst its food. The species occurs also plentifully in the Botanical Gardens at Sydney, but I have not yet met

with it in native forest in Australia, and it is therefore at least possible that it was introduced into Sydney with ferns from New Zealand. The food-plant is, however, considered native in both countries.

THYLACOSCELES, n. g.

Head smooth; ocelli present; tongue developed. Antennæ $\frac{5}{6}$, in male stout, very shortly ciliated ($\frac{1}{2}$), basal joint moderate, without pecten. Labial palpi very long, slender, recurved, smooth-scaled, terminal joint as long as second, acute. Maxillary palpi obsolete. Posterior tibiæ with long hairs above, with a large dense triangular tuft of long scales covering terminal half above, tarsi with long projecting spines at apex of two basal joints. Forewings with vein 1 furcate, 2 from $\frac{2}{3}$ of cell, 3 from angle, 7 to costa, 11 from $\frac{3}{4}$ of cell. Hindwings $\frac{1}{2}$, linear-lanceolate, cilia 6; veins 2, 3, 4, 5 tolerably parallel, 6 and 7 approximated at base.

Allied to *Stathmopoda*; sufficiently distinguished by the very short antennal ciliations, and peculiar tuft of tibiæ, apart from the neuriation; the latter, I believe, I have made out correctly, but cannot be sure on my single specimen, which proved difficult of examination. In repose the imago holds the posterior legs so as to project behind and rest on the surface, but with the tibiæ and tarsi bent so as to form an erect triangle with the surface on which it rests; hence with much the superficial appearance of the hindlegs of a grasshopper.

25. *Thyl. acridomima*, n. sp.

♂. 11mm. Head and palpi light yellowish-ochreous. Antennæ whitish-fuscous, base yellowish. Thorax fuscous. Abdomen grey. Anterior legs dark fuscous; middle legs ochreous-yellowish; posterior legs ochreous-whitish, tibiæ with a black apical ring, and tuft of posterior half dark grey. Forewings elongate, very narrow, broadest near base, long-pointed; fuscous, somewhat unevenly shaded, but without markings; cilia light fuscous. Hindwings fuscous-grey; cilia light fuscous.

Wellington; one specimen in January.

ZAPYRASTRA, n. g.

Head smooth; ocelli present; tongue developed. Antennæ $\frac{4}{5}$, in male subserrate, slightly thickened towards apex, basal joint elongate, obconical, without pecten. Labial palpi moderate, curved, ascending, slender, smooth, terminal joint shorter than second, acute. Maxillary palpi rudimentary. Posterior tibiæ thinly haired above on basal half and at apex. Forewings with vein 1 furcate, 2 from rather near angle of

cell, 7 and 8 stalked, 7 to costa, 10 from near angle, 11 absent. Hindwings $\frac{1}{2}$, linear-lanceolate, cilia 5; veins 2, 3, 4 parallel, cell open between 4 and 5, 5 and 6 stalked, 6 to close below apex, 7 approximated to 6 at base.

Allied to the European genus *Chrysoclista*, from which it differs principally in the neuration of forewings. The group of *Laverna*, to which it belongs, although extensively represented in Australia, has probably no truly indigenous representatives in New Zealand; the present species, common to both countries, is in all probability really Australian, and has found its way over within comparatively recent times.

26. *Zap. calliphana*, n. sp.

♂ ♀. 5–8mm. Head, palpi, antennæ, thorax, abdomen, and legs dark shining bronze, face whitish-bronze, legs spotted with white. Forewings lanceolate; bright dark golden-bronze; markings pale violet-golden-metallic; a fascia near base, often ill-defined; a nearly perpendicular fascia before middle; a dot in disc beyond middle, beneath which is a black dot or small spot on fold; an inwardly-oblique fascia at $\frac{3}{4}$; a small spot on anal angle; a streak along hindmargin from apex; a triangular snow-white spot on costa near apex: cilia fuscous-grey, round apex with two blackish lines, and a minute white dot above apex. Hindwings dark fuscous; cilia fuscous-grey.

Christchurch and the Bealey River; rather common from December to February, frequenting *Leptospermum*, on which the larva must certainly feed. The species is common also in New South Wales and Tasmania, frequenting the same plant, from September to April.

LIMNÆCIA, Stt.

Head smooth; ocelli absent; tongue developed. Antennæ $\frac{3}{4}$, in male serrate, moderately ciliated (1), basal joint very elongate, dilated towards apex, with one or two hair-scales at base. Labial palpi very long, recurved, second joint thickened with appressed scales, terminal joint longer than second, acute. Maxillary palpi rudimentary. Thorax in male with a long fine curved pencil of hairs from each side beneath, directed backwards. Posterior tibiæ clothed with long hairs above. Forewings with vein 1 furcate, 2 from $\frac{2}{3}$ of cell, 7 and 8 stalked, 7 to costa, 11 from before middle of cell. Hindwings $\frac{2}{3}$, elongate-lanceolate, cilia 2; veins all separate and tolerably parallel.

Stainton was undoubtedly mistaken in reuniting this genus to *Laverna*, to which it is by no means closely allied, differing in several essential points.

27. *Limn. phragmitella*, Stt.

♂ ♀. 15–21mm. Head and thorax pale ochreous. Palpi whitish-ochreous, terminal joint with a longitudinal dark fuscous line. Forewings elongate, very narrow, long-pointed; whitish-ochreous, brownish-tinged; a round dark fuscous dot in disc before middle, and a second at $\frac{2}{3}$, tending to be ringed with ochreous-whitish, and connected by an obscure streak of ochreous-whitish scales somewhat mixed with fuscous; beyond the second dot is generally a small fuscous spot: cilia whitish-ochreous. Hindwings pale grey, ochreous-tinged; cilia whitish-ochreous.

Larva yellow-whitish, with five brownish longitudinal lines; feeding in seedheads of *Typha angustifolia*, burrowing amongst the seeds, and causing the down to hang out in loose masses, exactly in the manner of *Scieropepla typhicola*.

Hamilton; one specimen in January, amongst the swamps of the Waikato. I have also taken it in New South Wales. The species occurs in Central Europe, but is not very widely known, probably owing to the retired habits of the imago. My specimens are the only ones taken outside Europe; yet, as it is hardly conceivable that the species should have been artificially introduced, and as the *Typha* is thought to be indigenous in suitable localities all round the world, I conjecture that the insect may be truly cosmopolitan. The light down of the seedheads, carrying the seeds of the plant and the ova of the insect, must be exceedingly susceptible of dissemination by the wind.

SYNTOMACTIS, n. g.

Head smooth; ocelli absent; tongue developed. Antennæ $\frac{3}{4}$, in male serrate, pubescent, basal joint very elongate, with pecten. Labial palpi moderately long, curved, ascending, second joint with loose rough scales beneath towards apex, terminal joint as long as second, slightly roughened anteriorly, acute. Maxillary palpi very short, appressed to tongue. Thorax in male with some very long fine hairs beneath from posterior extremity. Posterior tibiæ clothed with long hairs above. Forewings with vein 1 furcate, 2 from angle of cell, 5 and 6 out of 7, 7 to costa, 8 out of 7 before 6, 11 from middle. Hindwings $\frac{1}{2}$, linear-lanceolate, cilia 6; veins 2, 3, 4 parallel, 5 from a point with 6, 6 and 7 stalked.

Allied to the group of *Laverna*, but not very closely approaching any particular genus.

28. *Synt. deamatella*, Walk.

(*Gelechia deamatella*, Walk., 654.)

♂ ♀. 11–12mm. Head ochreous-white. Palpi white, second joint with basal half black, and apical and subapical ochreous rings, terminal joint with basal half black. Antennæ whitish,

obscurely ringed with blackish. Thorax white, or whitish-ochreous. Abdomen pale yellowish-ochreous, posteriorly greyer. Legs blackish, ringed with ochreous-white. Forewings very elongate, narrow, long-pointed; greyish-ochreous, coarsely and irregularly irrorated with dark fuscous; markings white, tending to be margined by a black suffusion; a triangular spot on costa before $\frac{1}{4}$, its apex sometimes almost reaching inner margin; an irregular somewhat oblique blotch beyond middle, touching costa anteriorly, and almost reaching inner margin; a small ill-defined, irregular, transverse spot near apex, most distinct on costa: cilia pale ochreous-greyish, round apex somewhat mixed with fuscous. Hindwings grey; cilia pale ochreous-grey.

Christchurch and Invercargill in December, February, and March; six specimens, amongst bush.

PROTEROCOSMA, Meyr.

Head smooth; ocelli present or absent; tongue developed. Antennæ $\frac{4}{5}$ to 1, in male serrate, pubescent or simple; basal joint elongate, with pecten. Labial palpi very long, recurved, smooth, slender, terminal joint longer than second, acute. Maxillary palpi rudimentary. Posterior tibiæ clothed with hairs above. Forewings with vein 1 furcate, 2 from $\frac{4}{5}$ of cell, 5 sometimes out of 7, 6 out of 7 or absent, 7 to costa, 8 out of 7, 11 from before middle. Hindwings about $\frac{1}{2}$, linear-lanceolate, cilia 3 to 6; veins 2, 3, 4 parallel, 5 approximated to 4, 6 and 7 from a point, or stalked, or rarely coincident.

This interesting genus, which is rather an old type of the family, and indicates the origin of some more widely-distributed forms, is rather extensively distributed in Australia, and I have also described several species from the South Pacific islands. Of the three New Zealand species, the first two are endemic, but markedly allied to Australian forms, the third is widely distributed in Australia.

- | | |
|---|----------------------|
| 1. Forewings with clear white lines | <i>apparitella</i> . |
| " without clear white lines | 2. |
| 2. Forewings with irregular white markings, irrorated | |
| with black | <i>ællotricha</i> . |
| Forewings with defined round black dots | <i>anarithma</i> . |

29. *Prot. apparitella*, Walk.

(*Gelechia apparitella*, Walk., 1,027.)

♂ ♀. 9–13mm. Head and thorax golden-ochreous, face white, eyes crimson. Palpi ochreous, more or less suffused with white, terminal joint white with anterior edge and often apex black. Antennæ white, ringed with black. Abdomen whitish-ochreous. Legs whitish, banded with dark fuscous, posterior pair pale whitish-ochreous. Forewings elongate, very narrow, long-pointed; vein 5 separate, 6 present; golden-

ochreous, paler towards costa posteriorly; markings snow-white, finely black-margined; a very slender median line from base to $\frac{1}{4}$; a slender oblique line from costa at $\frac{1}{5}$, terminating in a moderate triangular spot on inner margin before middle, which is either wholly white, or white with an ochreous centre, or wholly ochreous and scarcely paler than ground-colour; a line from $\frac{2}{5}$ of costa almost perpendicularly half across wing, thence abruptly rectangularly bent outwards to middle of disc, and again rectangularly bent to inner margin; a fine, extremely oblique line from middle of costa to disc at $\frac{3}{4}$, thence acutely angulated to anal angle, sinuate inwards beneath costa, connected with preceding line on costa by a fine white line, and on inner margin by a streak which is either white, or ochreous hardly paler than ground-colour; a whitish-ochreous or white, posteriorly black-margined, mark on costa at $\frac{4}{5}$, whence proceeds a black sometimes ill-defined line to apex; sometimes an irregular short white streak along hindmargin to apex: cilia light greyish-ochreous, round apex more golden-ochreous, with a black dot at base on apex. Hindwings with veins 6 and 7 stalked; costa in male with long loose hairs at base; grey; cilia light ochreous-greyish.

Auckland and Wellington; common amongst forest, in December and January.

30. *Prot. aëllotricha*, n. sp.

♂ ♀. 10–12mm. Head and thorax reddish-ochreous; face ochreous-whitish. Palpi white, second joint with three ochreous rings, terminal joint with three black rings. Antennæ white, ringed with black. Abdomen grey, towards base pale-ochreous. Legs whitish, banded with blackish. Forewings elongate, very narrow, long-pointed; vein 5 separate, 6 present; reddish-ochreous, tending to become whitish-ochreous round markings and towards base of inner margin; markings ochreous-white, closely irrorated with black; an irregular oblique fascia from $\frac{1}{4}$ of costa, not reaching inner margin, emitting a short streak from posterior edge above middle; an irregular somewhat 8-shaped spot in middle of disc, from upper part of which proceeds an irregular streak to costa before apex; an irregular ochreous-whitish streak along hindmargin from apex to anal angle; a black apical dot: cilia light ochreous-greyish, round apex reddish-ochreous, with a blackish basal line and two blackish apical hooks. Hindwings with veins 6 and 7 stalked; grey; cilia pale-grey, ochreous-tinged.

Hamilton; two specimens in January.

31. *Prot. anarithma*, n. sp.

♂ ♀. 7–10mm. Head and thorax brownish-ochreous, face ochreous-whitish. Palpi ochreous-whitish, second joint with

basal half and a subapical ring suffusedly irrorated with black, terminal joint irrorated with dark fuscous. Antennæ whitish-ochreous, ringed with dark fuscous. Abdomen grey-whitish, or grey. Legs dark grey, suffusedly ringed with whitish. Forewings lanceolate; vein 5 separate, 6 present; brownish-ochreous, sometimes more or less sprinkled with dark fuscous; a black dot on base of costa, sometimes obsolete, a second on costa near base, a third in disc beneath second, a fourth on base of inner margin, often obsolete, a fifth in disc before middle, a sixth on fold rather obliquely beyond fifth, and a seventh in disc at $\frac{2}{3}$; generally two small indistinct whitish-ochreous spots on costa and inner margin opposite seventh dot: cilia light grey, darker round apex. Hindwings with veins 6 and 7 from a point; grey; cilia light-grey.

Taranaki, Palmerston, Napier, and Masterton; from January to March, in some places exceedingly plentiful, but apparently not found everywhere. Around Taranaki I found it swarming in grassy places; it has quite the habits of an *Elachista*, and is probably a grass-feeder. It is very widely-distributed through Australia from east to west, but there also is local, and abundant in some places only.

ELACHISTA, Stt.

Head smooth; ocelli present; tongue developed. Antennæ $\frac{3}{4}$, in male simple, filiform or serrulate, basal joint moderate, with or without pecten. Labial palpi long, recurved, slender, smooth-scaled, terminal joint shorter than second, acute. Maxillary palpi obsolete. Posterior tibiæ clothed with long hairs above and beneath. Forewings with vein 1 simple, 2 from angle of cell, 4 sometimes absent, 5 absent, 6 out of 7, 7 to costa, 8 out of 7 or absent, 9 approximated to or from point with or out of 7, 11 from middle. Hindwings about $\frac{1}{2}$, narrow lanceolate, cilia 3 to 5; vein 4 sometimes absent, 5 absent, cell sometimes open below 6, 6 and 7 stalked.

A genus of considerable extent, and probably cosmopolitan, but from the obscurity of the species hitherto not much noticed outside Europe. Besides the seven New Zealand species, I have about fifteen Australian. All known larvæ of the genus mine in leaves of grasses or sedges. Wocke separates the species in which vein 4 of both wings is absent (it appears to change in both wings simultaneously) as a distinct genus, under the name *Pæciloptilia*; but, after careful consideration, this appears to me unnecessary: there is no other difference whatever, and, as I have remarked above, in this family the disappearance of a vein is not of great importance, and the neuration of many of its genera is liable to vary to that extent. I have therefore retained all in one genus, but used the character to separate it into sections.

1. Palpi wholly white or whitish	..	..	2.
" partly grey	..	..	4.
2. Forewings irrorated with grey	..	..	<i>exaula</i> .
" not irrorated with grey	..	..	3.
3. Head and thorax striped with brown and white			<i>thallophora</i> .
" not striped with brown and white	..	..	<i>helonoma</i> .
4. Terminal joint of palpi wholly white or whitish			5.
" " not wholly white or whitish	..	..	6.
5. Forewings with obscure dark fuscous streaks in disc	..	..	<i>ombrodoca</i> .
Forewings without obscure dark fuscous streaks in disc	..	..	<i>gerasmia</i> .
6. Forewings dark grey	..	..	<i>archæonoma</i> .
" whitish-grey	..	..	<i>melanura</i> .

§ A. Vein 4 of both wings present.

32. *Elach. melanura*, n. sp.

♂. 13mm. Head, palpi, antennæ, and thorax whitish-grey. Abdomen ochreous-whitish, with a dense black apical exertible tuft. Legs dark fuscous, posterior pair ochreous-whitish. Forewings lanceolate; whitish-grey, somewhat irrorated with darker; an elongate black dot on fold before middle, a second in disc above middle, and a third in disc at $\frac{2}{3}$; cilia grey-whitish, with a spot of black scales at base round apex, and tips sprinkled with black. Hindwings and cilia pale whitish-grey.

Hamilton; one specimen in January. I have two specimens from Australia which closely resemble this, and which agree in possessing the characteristic and highly peculiar black anal tuft; but, as they differ considerably from the New Zealand specimen, and also from one another, in the position of the black dots on the forewings, I have not felt justified at present in uniting them, although I think it very probable that a longer series of specimens may prove this character to be variable.

33. *Elach. gerasmia*, n. sp.

♂ ♀. 9–14mm. Head whitish. Palpi grey, terminal joint and apex of second white. Antennæ grey. Thorax whitish-grey. Abdomen grey-whitish, anal tuft in male more or less ochreous-tinged. Legs dark grey, posterior pair grey-whitish. Forewings lanceolate; light grey or rarely grey-whitish; a black dot on fold in middle, and an elongate black dot in disc at $\frac{2}{3}$; cilia grey, with indications of two black lines for a short distance below apex. Hindwings and cilia grey.

Hamilton, Makatoku, and Invercargill; common in swampy places, in December, January, and March.

34. *Elach. thallophora*, n. sp.

♂ ♀. 8–15mm. Head ochreous-whitish, with a central longitudinal ochreous-brown stripe. Palpi white. Antennæ whitish-fuscous. Thorax brown, with an ochreous-white stripe on each side of back. Abdomen grey, anal tuft ochreous-whitish. Legs dark fuscous, posterior pair whitish. Forewings lanceolate; pearly white; an ochreous-brown longitudinal streak from base of costa, and another from base in middle, converging to a point in disc at $\frac{4}{5}$, where they terminate; an ochreous-brown streak along inner margin from base to anal angle; in male these markings are thicker, darker, and more suffused, and posterior half of costa is also suffused with brown: cilia in male whitish-fuscous, in female ochreous-whitish, beneath anal angle fuscous-tinged. Hindwings grey; cilia light grey.

Christchurch (on sandhills) and Mount Arthur (4,000ft.), in January and March; locally abundant. The variation in size is noteworthy, some of the largest females being twice as large as the males. The species is a remarkably distinct one, but recalls *E. rufocinerea*, to which it has probably some real relationship.

§ B. Vein 4 of both wings absent.

35. *Elach. helonoma*, n. sp.

♂ ♀. 8–10mm. Head and thorax ochreous-whitish, sprinkled with ochreous. Palpi white. Antennæ fuscous. Abdomen grey-whitish, anal tuft ochreous-whitish. Legs dark fuscous, posterior pair ochreous-whitish. Forewings lanceolate; whitish, more or less irrorated with ochreous, especially on dorsal half; a slender ochreous-fuscous median longitudinal streak from near base to middle, and a second from above extremity of first to near apex; a fuscous dot beneath apex of first streak, sometimes obsolete; inner margin more or less obscurely brownish towards base: cilia grey-whitish. Hindwings pale grey; cilia grey-whitish.

Christchurch, on the Port Hills; in January and March, abundant amongst the tussock-grass, to which it appears attached.

36. *Elach. exaula*, n. sp.

♂. 9–10mm. Head and palpi ochreous-whitish. Antennæ fuscous. Thorax whitish-ochreous irrorated with grey. Abdomen grey, anal tuft whitish-ochreous. Legs dark grey, ringed with whitish, posterior tibiae whitish. Forewings lanceolate; pale whitish-ochreous, irrorated with grey, more closely and suffusedly on costa, more yellowish-tinged in disc; a slender black median streak from near base to before middle; a black elongate dot in disc above middle, and a second, larger

and more distinctly elongate, below it; a slender black median streak from $\frac{2}{3}$ to near apex: cilia light grey, round apex ochreous-whitish with a fine black line. Hindwings grey; cilia light grey.

Mount Arthur (4,000ft.); three specimens in January.

37. *Elach. ombrodoca*, n. sp.

♂ ♀. 6–9mm. Head grey-whitish, in male irrorated with dark grey. Palpi dark grey, terminal joint and apex of second whitish. Antennæ grey. Thorax grey-whitish, irrorated with dark grey. Abdomen grey, anal tuft ochreous-whitish. Legs dark grey, apex of joints whitish, posterior tibiæ ochreous-whitish. Forewings lanceolate; ochreous-whitish, in male densely irrorated throughout with dark grey, in female more sparsely; an indistinct slender dark fuscous streak along fold from near base to $\frac{1}{3}$; a cloudy dark-grey spot beneath costa slightly before middle, and another larger and more blackish obliquely beyond it near inner margin; preceding these are faint indications of an oblique paler fascia, more distinct in female; an indistinct short longitudinal dark fuscous streak in disc about $\frac{2}{3}$; slightly beyond this are very faint indications of two paler marginal spots, appearing to form an angulated fascia: cilia whitish-grey, ochreous-tinged, round apex more ochreous-whitish with a fine black line. Hindwings grey; cilia light grey.

Christchurch, Dunedin, and Invercargill; in August and September, and from February to April, very common in waste grassy places, as by roadsides.

38. *Elach. archæonoma*, n. sp.

♂ ♀. 6–8mm. Head, palpi, and thorax whitish irrorated with dark grey. Antennæ grey. Abdomen grey, anal tuft in male grey, in female ochreous-whitish. Legs dark grey, ringed with whitish. Forewings lanceolate; dark grey, irrorated with whitish; basal area in female distinctly paler; an oblique pale fascia before the middle, in male very obscure and indistinct, in female white and conspicuous; beyond this is a more or less defined blackish suffusion, tending to form two separate spots, lower more marked; indications of a short longitudinal dark fuscous streak in disc about $\frac{2}{3}$; in female two conspicuous white opposite almost connected spots beyond $\frac{2}{3}$, in male not traceable: cilia grey, with a fine black line round apex, in female with a distinct white apical spot. Hindwings and cilia grey.

Auckland, Nelson, Wellington, and Dunedin; common in grassy places by roadsides, in December and January. The very considerable dissimilarity between the sexes is the same as occurs in some European species, as *E. obscurella*.

BATRACHEDRA, Stt.

Head smooth; ocelli present; tongue developed. Antennæ $\frac{5}{6}$, in male filiform, simple, basal joint short, without pecten. Labial palpi moderately long, recurved, second joint with scales more or less slightly projecting angularly in front at apex, sometimes produced into a short dense tuft, terminal joint shorter than second, somewhat roughened with scales anteriorly, acute. Maxillary palpi very short, drooping. Posterior tibiae with short tolerably-appressed hairs above. Forewings with vein 1 obsoletely furcate, 2 from near angle of cell, 3 absent, 6 and 7 sometimes stalked, 7 to costa, 8 absent, 11 from near middle. Hindwings $\frac{1}{2}$, linear-lanceolate or linear, cilia 5-8; 2 and 3 sometimes absent, cell open between 4 and 5, 5 approximated to or out of 6 or absent, 6 and 7 approximated.

A genus containing at present two European species, probably two or three North American, about twenty Australian, and three from New Zealand. There is considerable variation in the scaling of the second joint of palpi, which sometimes forms a well-marked projecting tuft in front, whilst more commonly it appears only as a very slight projection, but these are essentially modifications of the same type, and are connected by such intermediate gradations that no separation is possible; and also in the neuration of the hindwings, where some of the veins are liable to disappear, but here also every gradation is found. The species are very similar in appearance and habit; probably most of the larvæ feed on the seeds of rush (*Juncus*).

1. Forewings white	..	..	..	..	<i>psithyra</i> .
" pale ochreous	..	..	..	..	2.
2. Palpi with second joint tufted in front..				..	<i>eucola</i> .
" " not tufted in front				..	<i>arenosella</i> .

39. *Batr. eucola*, n. sp.

♂. 19mm. Head and antennæ whitish-ochreous. Palpi whitish-ochreous, terminal joint and apex of second more brownish, second joint with scales projecting in front into an angular tuft. Thorax pale brownish-ochreous. Abdomen whitish-ochreous. Legs dark fuscous, apex of joints whitish-ochreous. Forewings elongate, very narrow, parallel-sided, long-pointed; veins 6 and 7 stalked; whitish-ochreous, somewhat sprinkled with brownish-ochreous, towards costa broadly suffused with brownish-ochreous, costal edge fuscous towards base; a dark fuscous dot in disc before middle, a second on fold obliquely before first, and a third, larger and somewhat transverse, in disc before $\frac{3}{4}$: cilia whitish-ochreous, beneath anal angle greyish-tinged, on costa marked with three dark fuscous dots, with indications of two dark fuscous lines at

apex only. Hindwings with all veins present; grey, slightly ochreous-tinged; cilia light grey, slightly ochreous-tinged, on costa whitish-ochreous.

Bealey River; one specimen in January. This is the largest species of the whole genus known, with the most pronounced tuft of palpi, and the full neuration of hindwings.

40. *Batr. arenosella*, Walk.

(*Gracilaria arenosella*, Walk., 857.)

♂ ♀. 11–14mm. Head and thorax whitish-ochreous. Palpi whitish-ochreous, apex of second joint blackish, scales slightly projecting, terminal joint more whitish, with sub-median and apical black rings. Antennæ whitish-ochreous, indistinctly ringed with fuscous, towards apex with three or four broader fuscous bands. Abdomen ochreous-grey-whitish. Legs dark fuscous, ringed with whitish, posterior tibiæ ochreous-whitish irrorated with dark fuscous. Forewings elongate, very narrow, long-pointed; veins 6 and 7 separate; pale yellow-ochreous, finely sprinkled with dark fuscous; a dark fuscous dot in disc before $\frac{2}{5}$, and another at $\frac{4}{5}$, occasionally obsolete: cilia pale grey, on costa whitish-ochreous, sharply divided at apex. Hindwings with veins 2, 3, and 5 absent; pale grey; cilia pale grey.

Larva feeds amongst seeds of *Juncus*, joining them together with a slight web, in August: pupa very slender, in a cocoon amongst the seeds.

Palmerston, Wellington, and Christchurch; common from January to March. Also, generally distributed in east and south Australia, which is doubtless its place of origin. The species is closely allied in every way to the European *B. pinicolella*.

41. *Batr. psithyra*, n. sp.

♂. 7–10mm. Head, thorax, and abdomen pearly white. Palpi white, second joint with a blackish sub-apical ring, scales slightly projecting, terminal joint with a blackish basal ring. Antennæ white, indistinctly ringed with pale fuscous. Legs white, indistinctly banded with fuscous. Forewings elongate, very narrow, long-pointed; veins 6 and 7 stalked; white, more or less sprinkled with fuscous; a dark fuscous elongate dot in disc before middle, a second very obliquely before it on fold, and a third in disc beyond $\frac{2}{3}$; a sharply-marked black apical dot: cilia whitish, with a black line opposite apex only. Hindwings with veins 2, 3, and 5 absent; whitish; cilia whitish.

Auckland, Hamilton, Wellington, Nelson, and Invercargill; ten specimens, in December and January.

GRACILARIADÆ.

Head smooth, or rough on crown (not in New Zealand genera). Antennæ nearly as long as forewings or longer, simple. Maxillary palpi developed. Labial palpi slender, ascending. Forewings with vein 1 simple, 11 from before middle of cell. Hindwings lanceolate or linear, cell open. Larva 14-legged.

The New Zealand species of this family have apparently no near specific relationship to the Australian; possibly they have more affinity with the South American, which are insufficiently known.

- | | | |
|---|----|----------------------|
| 1. Palpi with second joint tufted beneath | .. | <i>Coriscium.</i> |
| " " not tufted beneath | | 2. |
| 2. Posterior tibiæ rough-haired above | .. | <i>Conopomorpha.</i> |
| " " smooth above | .. | <i>Gracilaria.</i> |

GRACILARIA, Z.

Head smooth; ocelli absent or rarely present; tongue developed. Antennæ 1 or over 1, in male filiform, slender, basal joint moderate, without pecten. Labial palpi long, curved, ascending, smooth-scaled, second joint sometimes loosely scaled beneath towards apex, terminal joint almost as long as second, acute. Maxillary palpi moderately long, filiform, porrected. Middle tibiæ sometimes dilated with scales, posterior tibiæ smooth-scaled. Forewings with vein 1 simple, 2 from $\frac{5}{6}$, 3 sometimes absent, 4 and 5 often approximated, 7 to costa, 11 from before middle or near base, secondary cell sometimes well defined. Hindwings about $\frac{1}{2}$, lanceolate or linear-lanceolate, cilia 4-5; 3 sometimes absent, cell open between 4 and 5, 5 and 6 stalked, their stalk sometimes continued to base of wing, 7 from angle of cell, or rarely out of 6.

The larvæ are usually leaf-miners, or less commonly roll leaves into a peculiar conical chamber; but the only known New Zealand larva is exceptional in the genus, living in spun-up shoots like an ordinary *Tortrix* or *Gelechia*.

- | | | |
|---|----|---------------------|
| 1. Forewings with costal half yellow | .. | <i>chrysitis.</i> |
| " " not yellow | .. | 2. |
| 2. Forewings obliquely streaked with white and fuscous | .. | 3. |
| Forewings not obliquely streaked with white and fuscous | .. | 4. |
| 3. Palpi wholly white | .. | <i>leucocyma.</i> |
| " with two black rings | .. | <i>atllomacha.</i> |
| 4. Palpi with two black rings | .. | <i>atthalota.</i> |
| " without two black rings | .. | 5. |
| 5. Palpi with second joint whitish | .. | <i>linearis.</i> |
| " " reddish-ochreous | .. | <i>chalcodelta.</i> |

§ A. Vein 7 of hindwings from angle of cell.

42. *Grac. chrysitis*, Feld.

(*Gracilaria chrysitis*, Feld., pl. exl. ; *G. adelina*, Meyr., "Proc. Linn. Soc. N.S.W.," 1880, 142 ; *G. rutilans*, Butl., "Cist. Ent.," ii., 561.)

♂ ♀. 12–13mm. Head and thorax deep reddish-ochreous, violet-shining, face snow-white. Palpi reddish-ochreous, towards base white, terminal joint dark purplish-fuscous. Forewings deep reddish-ochreous, with coppery-violet reflections ; a very broad pale metallic yellow costal band, its lower edge indented by a conical projection of ground-colour before middle, and a shorter one midway between this and base, both suffused with deep cobalt-blue ; dorsal reddish-ochreous area marked on lower $\frac{2}{3}$ with regular transverse strigulae of deep cobalt-blue, appearing black in some lights. Hindwings rather dark grey.

Hamilton, Palmerston, and Christchurch ; rather common amongst forest, in September, January, and March. This and the next two species are nearly related together.

43. *Grac. chalcodelta*, n. sp.

♂ ♀. 11–13mm. Head whitish-yellowish, more or less reddish-ochreous on crown. Palpi reddish-ochreous mixed with dark fuscous. Antennae dark fuscous, ringed with whitish. Thorax reddish-ochreous. Abdomen whitish-grey. Legs purple-blackish, banded with white, middle tibiae with large tuft of rough scales beneath, posterior tibiae white. Forewings elongate, very narrow, long-pointed ; reddish-ochreous, with purple gloss, with scattered blackish and yellow-whitish scales forming indications of obscure transverse strigulae ; costa and inner margin distinctly strigulated with black and pale yellowish ; a pale brassy-yellow well-defined triangular patch on costa before middle, reaching about half across wing : cilia light grey, on costa and round apex reddish-ochreous, round apex mixed with blackish in several ill-defined lines. Hindwings and cilia light grey.

Whangarei, Auckland, Taranaki, Makatoku, Masterton ; in December, February, and March, six specimens.

44. *Grac. linearis*, Butl.

(*Gracilaria linearis*, Butl., "Proc. Zool. Soc. Lond.," 1877, 406, pl. xliii., 16.)

♂ ♀. 13–14mm. Head and thorax reddish-ochreous, sometimes with a brassy gloss. Palpi whitish, terminal joint dark reddish-fuscous. Antennae fuscous annulated with whitish. Abdomen ochreous-whitish or grey. Legs dark purplish-fuscous, banded with white, posterior tibiae white. Forewings elongate, very narrow, long-pointed ; more or less deep reddish-ochreous, with a brassy gloss ; a hardly perceptibly paler

triangular patch on costa before middle; some scattered irregular blackish dots, mostly on posterior $\frac{2}{3}$ of fold, and in a longitudinal series in posterior half of disc: cilia light grey or ochreous-grey-whitish, round apex and on costa reddish-ochreous. Hindwings and cilia grey or ochreous-grey-whitish.

Var. *a*. Forewings suffused with dark purplish-fuscous, with a bright reddish-ochreous streak along inner margin.

Larva 14-legged, moderate, cylindrical, tapering at both ends; dull grey-greenish or grey-yellowish; dorsal darker; subdorsal broad, grey, or obsolete; head and plate on second segment dark fuscous. Feeds between spun-together shoots or leaves of *Coriaria ruscifolia*, *C. thymifolia*, and *C. angustissima*, in January.

Napier, Wellington, Arthur's Pass (3,000ft.), Christchurch, and Invercargill; from December to February, common. I bred the species in abundance from the larvæ; otherwise I could scarcely have credited the unusual larval habit.

45. *Grac. leucocyma*, n. sp.

♀. 9mm. Head and palpi white. Antennæ fuscous, beneath white. Thorax light grey. Abdomen whitish. Legs dark grey, ringed with white, posterior tibiæ white. Forewings elongate, very narrow, pointed; grey; markings snow-white; a rather broad irregular streak along inner margin from base to apex, interrupted before middle by a very oblique indistinct line of ground-colour; eight short more or less wedge-shaped streaks from costa, first from $\frac{1}{4}$, slenderly produced on costa towards base, first four outwardly oblique, remainder inwardly oblique, second and fourth reaching half across wing, the rest much shorter; a small irregular blackish apical dot, preceded by a white dot: cilia ochreous-grey-whitish, round apex whiter, with indications of two dark fuscous lines. Hindwings whitish-grey; cilia ochreous-grey-whitish.

Auckland, in December; one specimen. Although superficially resembling the following species, it is not really closely allied.

§ B. Vein 7 of hindwings out of 6.

46. *Grac. ællomacha*, Meyr.

(*Gracilaria ællomacha*, Meyr., "Proc. Linn. Soc. N.S.W.," 1880, 158.)

♂ ♀. 7-9mm. Head and palpi snow-white, palpi with apex of second joint and a subapical ring of terminal joint black. Thorax snow-white, with a small black spot on shoulder. Forewings snow-white; markings fuscous, irrorated with dark fuscous; a cloudy central longitudinal streak from near base to disc above anal angle, more or less obsolete towards base, connecting obscurely with about seven oblique

costal and about four oblique dorsal streaks (these vary somewhat); costal streaks usually alternately slender and thick; a fuscous apical spot: cilia grey, round apex white, with two dark fuscous lines and a black apical hook. Hindwings fuscous-grey, cilia paler.

Wellington and Christchurch, in September, January, and February; four specimens.

47. *Grac. ethalota*, Meyr.

(*Gracilaria ethalota*, Meyr., "Proc. Linn. Soc. N.S.W.," 1880, 143.)

♂. 9mm. Head and thorax fuscous-grey, face grey-whitish. Palpi whitish, apex of second joint and a subapical ring of terminal joint black. Forewings purplish-grey; margins faintly dotted with ochreous-whitish posteriorly: cilia grey, with obscure darker lines, and a white apical hook. Hindwings fuscous-grey, cilia paler.

Dunedin, in January; one specimen. Notwithstanding the different superficial appearance, this species is nearly allied to the preceding.

CORISCIMUM, Z.

Characters of *Gracilaria*, but palpi with a loose projecting tuft of scales towards apex of second joint beneath, terminal joint usually longer than second.

48. *Cor. miniellum*, Feld.

(*Coriscium miniellum*, Feld., pl. cxl.; *Gracilaria ethela*, Meyr., "Proc. Linn. Soc. N.S.W.," 1880, 152.)

♂ ♀. 11–13mm. Head yellow on crown, crimson behind, face snow-white with two pale crimson spots. Palpi white, second joint crimson. Thorax yellow, anterior margin and a posterior spot crimson. Forewings pale yellow, deeper towards inner margin; a bright crimson undulating central streak from base to apex, sometimes margined with dark fuscous above, connected with inner margin by perpendicular bars near base and at $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$, and connected with costa at and near base; a round crimson apical spot, containing a blackish spot towards costa, and a white triangular spot on inner margin: cilia yellow round apex, with a dark fuscous hook, crimson below apical spot, thence very pale crimson. Hindwings light crimson, cilia very pale crimson, on costa grey.

Var. *a*. All crimson colouring replaced by ochreous-brown, margined with dark fuscous.

Hamilton, Taranaki, and Palmerston; from January to March, locally plentiful, frequenting the depths of the forest. The variety occurs with the type, but much more scantily, in the proportion of about one in fifteen. I can offer no explanation of the magnificent colouring of this species, which would

be extraordinary anywhere, but is singularly different from the usually sombre insects of New Zealand.

CONOPOMORPHA, Meyr.

Vein 11 of forewings should have been given as present, from near base of cell. The generic characters have been given previously, and need not be repeated. The genus is distinguished from *Gracilaria* by the rough hairs of posterior tibiæ, the rough scaling of palpi, and the stalking of veins 3 and 4 of forewings.

49. *Con. cyanospila*, Meyr.

(*Conopomorpha cyanospila*, Meyr., "Trans. N.Z. Inst.," 1885, 183.)

I need not repeat here the details given under the above reference, to which I have nothing to add.

NEPTICULIDÆ.

Head rough-haired all over. Antennæ shorter than forewings, basal joint dilated to form an eyecap. Maxillary palpi developed. Hindwings lanceolate, cell open.

Probably this family should be included in the *Tineidæ*, to which it is closely allied, and from which it differs essentially only by the eyecap of the antennæ, not a very important point. At present I place them separate, until further consideration. The neuration of the known genera is of a very degraded type, and the species are amongst the smallest known *Lepidoptera*.

NEPTICULA, Z.

Head densely rough-haired; no ocelli; tongue absent. Antennæ $\frac{1}{2}$ — $\frac{3}{4}$, in male simple, filiform, basal joint dilated and excavated beneath to form an eyecap. Labial palpi short, porrected, filiform or loosely scaled. Maxillary palpi moderately long, folded, filiform. Posterior tibiæ clothed with rough hairs above. Forewings with vein 1 obsoletely furcate, cell open between 2 and 6, 3, 4, 5 absent, 8 out of 7 or absent, 7 to costa, 9 absent, 11 from before middle. Hindwings $\frac{1}{2}$ — $\frac{3}{4}$, lanceolate, cilia 3-4; veins 3, 4, 5 absent, cell open between 2 and 6, 6 and 7 apparently from a point.

The genus is probably cosmopolitan. In Europe and North America it is extensively developed, and I am acquainted with about twenty Australian species, some of which are very similar to the European. The larvæ have 18 rudimentary legs, and mine blotches or galleries in leaves; the Australian larvæ have the same habits as the European, but I have not observed signs of the larvæ in New Zealand. I have not properly examined the neuration of the following species, owing to the small size of the insects and the possession of only single specimens, but it appears normal.